



Pollution Prevention & Oil and Water Separator

Information Sheet



Background

Oil and water separators (OWS) are employed across a range of industries and are integral in ensuring clean, safe, and efficient practices. OWSs come in several shapes and sizes but most of them use gravity and the natural differences in the densities (weight) of oil and water to filter out oil and debris contamination. Regular cleaning and leak prevention help avoid the buildup of oil and sludge and ensure the most efficient operation of an OWS. Enacting preventative measures is the best way to manage pollution by stopping it at its source. *Facilities should verify applicable local limits and any pretreatment equipment required by the POTW, such as oil-water separators.*

Best Management Practices

Manage

Routine management of an OWS system is the best way to maintain it; below are the different checks you can do to ensure a clean and efficient OWS.

- **Daily Checks:** Daily checks should include a visual check around the parameter and key input/output areas of the OWS
- **Weekly Checks:** During weekly checks it's important to check the following: the point of output for any oil discharge bypassing the OWS, drains for unauthorized substances, and other points of interest like joints, connectors, hoses and mats, for leaks.

The actions outlined do not replace or ensure compliance with regulatory standards set by the Indiana Department of Environmental Management (IDEM). If regulatory or compliance assistance is needed, refer to IDEM's **Compliance and Technical Assistance Program (CTAP)**.

- **Quarterly Checks:** Quarterly checks go more in depth, considering the outside and the inside of the OWS. Using a long (usually about 8 feet) measuring stick, push it through the tank. Any resistance when reaching the bottom indicates sludge accumulation at the base of the separator.

Here is a simple equation you can complete when taking these measurements to determine if there is enough sludge or oil to act.

- Is the distance from rim of access cover to bottom of structure
- Is the distance from rim of access cover to top of sludge layer
- Depth of sludge layer ($C = A - B$)**
- Is the distance from rim of access cover to the oil/water interface
- Distance from rim of access cover to the top of the liquid surface
- Depth of oil layer ($F = D - E$)**

Depth of Sludge Calculator

- | | |
|----------|--|
| A | Distance from rim of access cover to bottom of structure |
| B | Distance from rim of access cover to top of sludge layer |

C | Depth of Sludge Layer

Depth of Oil Layer Calculator

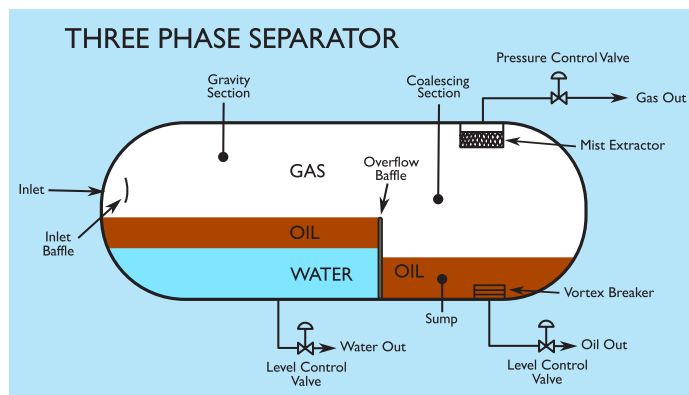
- | | |
|----------|--|
| D | Distance from rim of access cover to oil/water interface |
| E | Distance from rim of access cover to top of liquid surface |

F | Depth of Oil Layer

These can be used to easily calculate the amount and percentage of buildup inside your OWS. Tracking this is important to determine how often you need to clean the tank. You can hire a cleaning company to remove the sludge and oil from the tank when sludge accumulates to 20% of the wetted height of the separator, oil accumulates to 5% of the wetted height of the separator, or when 75% of the retention capacity of the OWS is filled.

 IDEM's Pollution Prevention Team has developed an Excel sheet that allows you to easily calculate this formula, check it out on our webpage: <https://www.in.gov/idem/prevention/pollution-prevention-toolkit>.

Yearly Checks: Yearly checks provide an opportunity to take a detailed account of your OWS and ensure there are no outstanding issues needing to be fixed. Yearly checks are when the OWS should be cleaned, if it hasn't been previously, to ensure there is no longstanding oil in the tank.



Repair

During one of the many routine checks, should you find a problem with your OWS system, it's important you take the proper steps to fix it as soon as possible. For both cleaning and repairs, it is recommended companies hire professionals to further reduce the possibility of any leaks or spills during these processes.



Horizontal OWS system.

Prevent

Along with routine inspections, there are other preventative measures you can take to avoid unnecessary contamination and inefficiency.

Avoid Contamination:

- Never allow contaminants like fuel, paint, alcohol, degreaser, and coolant into an OWS.
- Avoid putting contaminated objects in or near water when possible.

Reduce Buildup:

- Never allow bulk or concentrated oil wastes to enter the OWS; separators are designed to only for incidental oil removal.
- If water is contaminated with dust or sand, install a dust filter.

Use the methods outlined in the routine maintenance section to ensure that the OWS is working properly. These processes will help to reduce pollution and reduce overall costs associated with larger issues related to an OWS.



Vertical OWS system.

Any brand names or mention of specific commercial products or services in examples does not imply endorsement by the Indiana Department of Environmental Management.

Resources

IDEM's Compliance and Technical Assistance Program (CTAP) is a free and confidential service available to all Indiana businesses and regulated entities for on-site and remote assistance. Contact **CTAP** at (317) 232-8172 or use the [CTAP Portal](#) to submit a request for confidential regulatory and technical assistance. For more information, visit idem.IN.gov/CTAP.

For more information and resources on oil and water separators, pollution prevention strategies, or Peer Matching, visit idem.IN.gov/prevention.

